occurs in the Ethiopian highlands, and so far unrecorded in Kenya. Finally, in the drier open *Acacia* bush below 900 m at the northern end of the hills, about ten Common Quail *Coturnix coturnix* were flushed singly during an hour's walking, and the species was evidently quite common. From their rather pale appearance, and from the habitat and altitude at which they were found, these were presumed to have been nominate Palaearctic birds, perhaps newly arrived passage migrants.

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Dr D. J. Pearson, Browses, Sibton, Saxmundham, Suffolk IP17 2JH and M. A. C. Coverdale, Box 2978, Nakuru, Kenya

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Secretary Bird *Sagittarius serpentarius* feeding on Marsh Warblers *Acrocephalus palustris* in Tsavo, Kenya

In the autumn, during favourable weather conditions of mist and no moon, thousands of Palaearctic migrants come to ground at Ngulia Lodge (3°00S, 38°13E), Tsavo National Park (West), Kenya (Pearson & Backhurst 1976, and annual reports in *Scopus*). In early November 1990, the area was still dry with few green leaves and little new grass growth. No Secretary Birds *Sagittarius serpentarius* were seen in this time. However, during the December visit, by which time the area was green and lush, I regularly saw a pair of Secretary Birds, either soaring overhead or patrolling the area on foot.

After the misty and wet night of 17 December several hundred migrants had been grounded and many remained in the shrubby area around the lodge during the day. I saw two Secretary Birds slowly walking through the grass and shrubby area to the west of the lodge, searching for food in the middle of the day. One of the birds interrupted its slow striding walk and ran forward fast—obviously hunting an animal which was trying to escape in the rank grass. After 10–15 s of kicking in the grass, the Secretary Bird grabbed a small warbler with its bill and, with a few jerks, turned the warbler's body round and swallowed it. I continued to watch the Secretary Bird and, after a few minutes, I saw it take and swallow another warbler, which I was able to identify as a Marsh Warbler *Acrocephalus palustris*, from the grass.

Secretary Birds are said to be opportunistic feeders; they regularly eat rodents, reptiles, large beetles and grasshoppers, and any small animal up to the size of a hare (*Lepus*) may be eaten if caught (Brown, *et al.* 1982, Kemp 1985). Eggs and chicks of ground-nesting birds may also be eaten (Kemp 1985). Feeding is always on the ground and the prey is immobilized by kicks from the short stout toes and their nail-like claws (Kemp 1985). Mobile prey is captured by running, sometimes aided by wing-flapping. The only notes of

adult birds as prey I have found in the literature relate to examples killed in grass fires (Brown, *et al.* 1982, Kemp 1985). The Marsh Warblers preyed on at Ngulia may have been exhausted or in poor condition after their migration although they were active enough to require the Secretary Bird to run after them and then immobilize them with kicks.

Nikolaus (1990) reported shrikes Laniidae feeding on migrating Marsh Warblers in a desert oasis in the Sudan. In addition, the timing of the breeding of Eleonora's Falcons *Falco eleonorae* and Sooty Falcons *F. concolor* to coincide with the autumn migration of small passerines is well known (Cramp & Simmons 1980, Walter 1979). Whether Secretary Birds regularly exploit concentrations of grounded warblers remains to be shown by further observation.

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Susanne Åkesson, Department of Ecology, Animal Ecology, Lund University, Ecology Building, S-223 62, Lund Sweden

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Harrier Hawk *Polyboroides typus* breaks open tree hole to aid prey capture

On 27 July 1990 near Kiboko on the Nairobi–Mombasa road, we observed an adult Harrier Hawk *Polyboroides typus* as it foraged in mature *Acacia xanthophloea*. The bird was searching holes and other cavities in the classic manner, clinging precariously and flapping its wings for balance at each stop. After a few minutes, it reached into a hole and grabbed a small mammal which it carried to a perch which was too heavily screened by vegetation to allow us a good view. On finishing, the hawk returned to the same tree hole and, after a moment or two of delving with its leg, proceeded to dismantle the entrance with bill and foot, stopping every few seconds to delve again. After five minutes of modification, a second small mammal was captured and carried off to the same perch. Positive identification was impossible, but the prey was similar in size to an acacia rat *Thallomys paedulcus*.

While hunting, harrier hawks are well known to destroy nests, like as those of weavers Ploceinae (Brown, Urban & Newman, 1982), but such modification of tree holes may be less common, and it seems worth reporting.